

**Amendment to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A particulate composition comprising at least two different nanocrystalline materials selected from the group consisting of oxides and hydroxides of elements of Groups IIA, IIIA, IVA, transition metals and lanthanide series of the CAS Periodic Table, said different materials being co-solidified with one of said different nanocrystalline materials forming a matrix in which at least one other different nanocrystalline material is dispersed and intimately intermingled, with at least one of the materials exhibiting an average crystallite size of up to about 4 nm by XRD analysis, said composition presenting a surface area of between 135-834 m<sup>2</sup>/g.
2. (Original) The composition of claim 1, including from 2-4 of said different materials.
3. (Original) The composition of claim 2, including 2 of said different materials.
4. (Previously Presented) The composition of claim 1, all of said different materials exhibiting an average crystallite size of up to about 4 nm by XRD analysis.
5. (Original) The composition of claim 1, including aluminum oxide and magnesium oxide as said different materials.

6. (Previously Presented) The composition of claim 1, said composition having a BET surface area which is at least about 30% larger than the surface area of at least one of the nanocrystalline materials making up the composition, if said at least one nanocrystalline material were prepared alone.

7. (Previously Presented) The composition of claim 6, said composition having a BET surface area which is at least about 50% larger than the surface area of at least one of the nanocrystalline materials making up the composition, if said at least one nanocrystalline material were prepared alone.

8. (Previously Presented) The composition of claim 1, said different materials selected from the group consisting of oxides and hydroxides of Al, Mg, Ca, Sr, Ba, Zn, Co, Ni, Fe, Ti, Pd, Rh, V, Mn, Ga and Si.

9. (Previously Presented) The composition of claim 1, there being two of said different materials selected from the group consisting of the combinations,  $\text{Al}_2\text{O}_3\cdot\text{MgO}$ ,  $\text{Al}_2\text{O}_3\cdot\text{CaO}$ ,  $\text{Al}_2\text{O}_3\cdot\text{SrO}$ ,  $\text{Al}_2\text{O}_3\cdot\text{BaO}$ ,  $\text{Al}_2\text{O}_3\cdot\text{ZnO}$ ,  $\text{Al}_2\text{O}_3\cdot\text{CoO}$ ,  $\text{Al}_2\text{O}_3\cdot\text{NiO}$ ,  $\text{Al}_2\text{O}_3\cdot\text{Fe}_2\text{O}_3$ ,  $\text{Al}_2\text{O}_3\cdot\text{TiO}_2$ ,  $\text{Al}_2\text{O}_3\cdot\text{PdO}$ ,  $\text{Al}_2\text{O}_3\cdot\text{RhO}$ ,  $\text{Al}_2\text{O}_3\cdot\text{V}_2\text{O}_5$ ,  $\text{Al}_2\text{O}_3\cdot\text{MnO}$ ,  $\text{Ga}_2\text{O}_3\cdot\text{MgO}$ , and  $\text{SiO}_2\cdot\text{MgO}$ .

10. (Original) The composition of claim 1, one of said materials being present in a greater amount by weight as compared with another of said materials.

11. (Original) The composition of claim 1, said composition being made up of first and second different nanocrystalline materials, with a molar ratio of the first and second materials ranging from about 0.1-10.

12-44. (Canceled)

45. (Currently Amended) Solid oxides or hydroxides produced by the method comprising the steps of:

separately preparing a plurality of different alkoxide solutions in a compatible solvent, each alkoxide including an ion moiety selected from the group consisting of the ions of the elements of Groups IIA, IIIA, IVA, the transition metals and the lanthanide series of the CAS Periodic Table;

mixing and hydrolyzing said plurality of alkoxide solutions to give a gel comprising the corresponding nanocrystalline hydroxides of said different alkoxides; and

drying said gel to yield a co-solidified hydroxide composition with one of said nanocrystalline hydroxides forming a matrix with at least one other of said nanocrystalline hydroxides dispersed within said matrix, or thermally converting said hydroxides to the corresponding solid oxides thereby yielding a co-solidified oxide composition with one of said oxides forming a matrix in which the at least one other of said oxides is dispersed, at least one of said hydroxides or oxides exhibiting an average crystallite size of up to about 4 nm, said composition presenting a surface area of between 135-834 m<sup>2</sup>/g.

46-66. (Canceled)

67. (New) The composition of claim 1, at least one of said materials being an oxide or hydroxide of an element of Group IIA of the CAS Periodic Table.

68. (New) The solid oxides or hydroxides according to claim 45, at least one of said alkoxide solutions including an ion moiety selected from the group consisting of ions of the elements of Group IIA of the CAS Periodic Table.